

FIGURE NSH-015:1. Ambient Temperature and Fluid Electrical Conductivity; Gunnison Hydrology Study; Excelsior Mining; Arizona; Borehole: NSH-015.

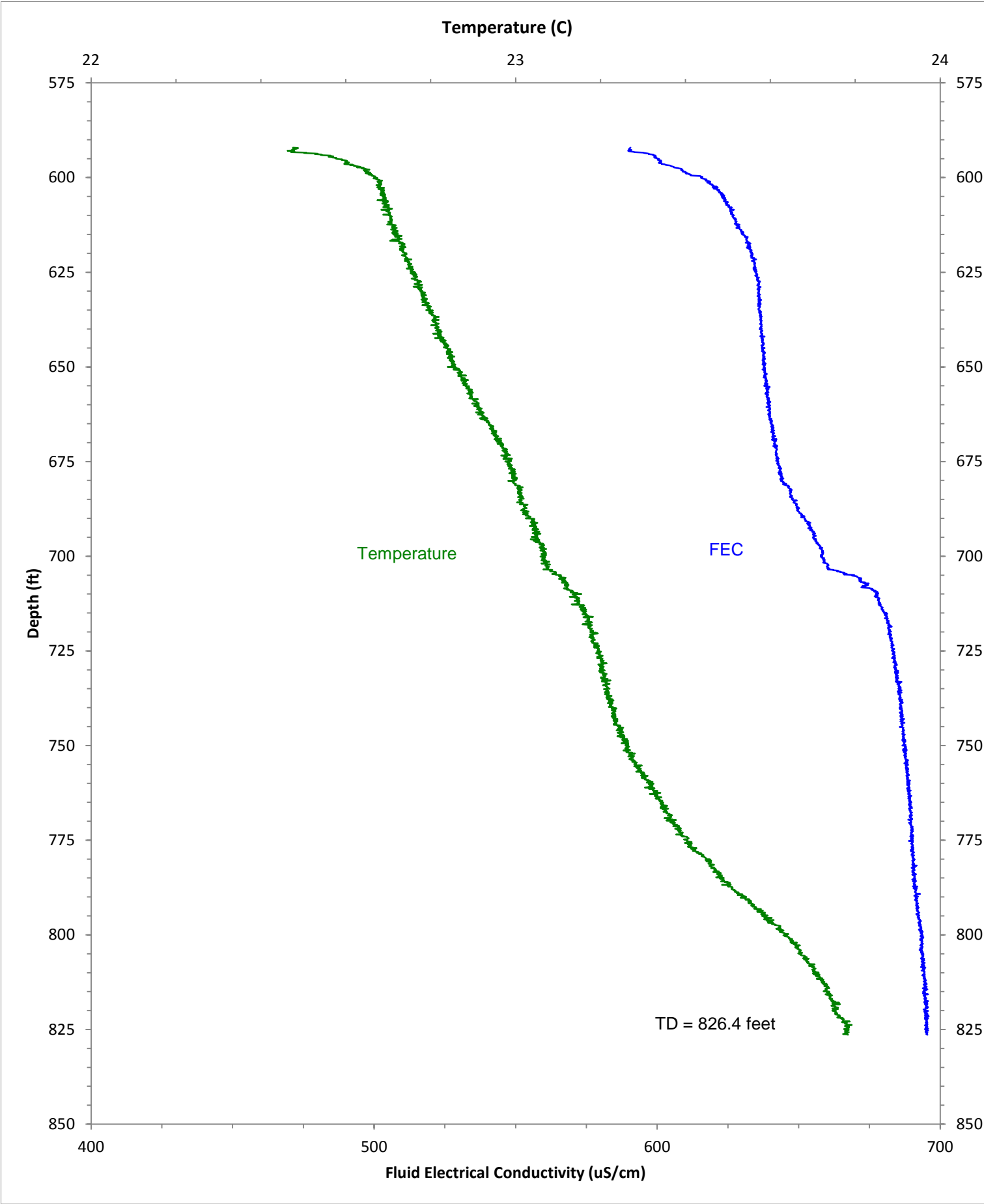


FIGURE NSH-015:2. Injection And Raised-Head Data During Spinner Flowmeter Injection Stress-Test at 40 GPM; Gunnison Hydrology Study; Excelsior Mining; Arizona; Borehole: NSH-015.

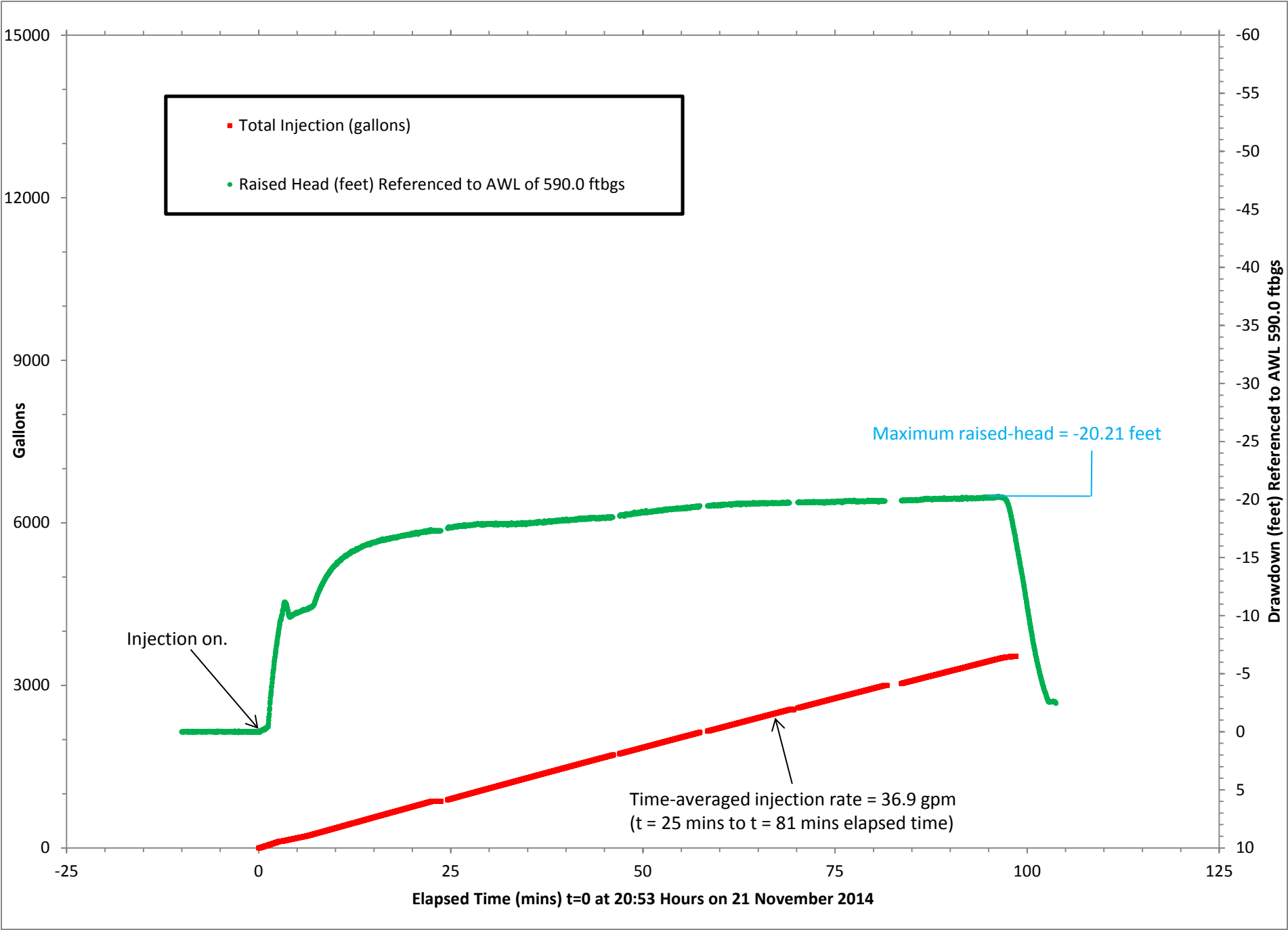


Table NSH-015:1. Summary of Corehole Dynamic Flowmeter Test-Station Results and Spinner Flowmeter Results; Gunnison Hydrology Study; Excelsior Mining; Arizona; Borehole: NSH-015.

NSH-015: November 15 and 21, 2014					
Depth (feet)	Depth (meters)	Flow in Borehole During Ambient Testing (GPM)	Flow in Borehole During Injection Testing (GPM)	Percent Flow of Total Injection (%)	Comments
599.5	182.73	0.00	36.9	-100.0	
607.5	185.17	0.00	36.9	-100.0	
617.0	188.06	0.00	29.9	-81.0	
624.0	190.20	0.00	29.1	-78.9	
638.5	194.61	-0.01	27.6	-74.8	
659.5	201.02	0.00	27.6	-74.8	Average of Ambient flow zones from 683.5 to 950.5 feet = 0.06 gpm
673.5	205.28	-0.01	19.5	-52.8	
695.5	211.99	-0.01	19.5	-52.8	
725.0	220.98	-0.05	12.3	-33.3	
744.5	226.92	-0.07	9.6	-26.0	Average of Ambient flow zones from 744.5, 758.0 and 769.0 feet = 0.06 gpm
758.0	231.04	-0.06	9.6	-26.0	
769.0	234.39	-0.06	9.6	-26.0	
781.5	238.20	-0.05	8.5	-23.0	
802.5	244.60	0.00	0.0	0.0	

Note: Positive flow values represent upflow in the borehole, negative values represent downflow.

NA = Not Applicable. No test station was taken at that depth under the respective test condition.

Ambient water level (AWL) was recorded at 590.0 ftbgs on November 21, 2014 before Spinner Flowmeter Testing was initiated.

Table NSH-015:2. Summary of Corehole Dynamic Flow Meter Results With Hydraulic Conductivity, Transmissivity and Head Estimations; Gunnison Hydrology Study; Excelsior Mining; Arizona; Borehole: NSH-015.

Well Name	NSH-015
Ambient Depth to Water (ftbtoc)	NA
Ambient Depth to Water (ftbgs)	590.00

Diameter of Borehole (ft)	0.74
Maximum Raised Head (ft)	20.21
Effective Radius (ft)	100

Interpretation of Corehole Dynamic Flowmeter Logging Results: NSH-015									
Interval No.	Top of Interval (ft)	Bottom of Interval (ft)	Length of Interval (ft)	Ambient Flow <sup>1</sup> (gpm)	Darcy Velocity in Aquifer <sup>2</sup> (ft/day)	Interval-Specific Flow Rate During Injection (gpm)	Interval-Specific Hydraulic Conductivity <sup>3</sup> (ft/day)	Transmissivity (ft <sup>2</sup> /day)	Interval-Specific Depth to Water - Vertical (ftbgs)
1	607.5	612.0	4.5	0.00	NA	-7.0	1.32E+01	5.95E+01	NA
2	617.8	622.8	5.0	0.00	NA	-0.8	1.36E+00	6.79E+00	NA
3	625.5	636.7	11.2	0.00	NA	-1.5	1.14E+00	1.27E+01	NA
4	665.5	672.2	6.7	0.01	NA	-8.1	1.03E+01	6.89E+01	NA
5	699.0	722.8	23.8	0.04	NA	-7.2	2.58E+00	6.15E+01	NA
6	725.6	739.4	13.8	0.01	NA	-2.7	1.67E+00	2.30E+01	NA
7	774.1	779.5	5.4	-0.01	NA	-1.1	1.71E+00	9.26E+00	NA
8	785.5	802.0	16.5	-0.05	NA	-8.5	4.35E+00	7.18E+01	NA

Note: Negative flow is outflow from the borehole to the aquifer, positive flow is inflow to the borehole.

<sup>1</sup> Downward ambient vertical flow is identified in this borehole under ambient conditions.

<sup>2</sup> Darcy Velocity, or Specific Discharge in aquifer, is calculated using the observed volumetric flow rate, the cross-sectional area of the flow interval in the wellbore and a wellbore convergence factor of 2.5 (Drost, 1968). The Darcy Velocity is only applicable to ambient horizontal flow.

<sup>3</sup> Hydraulic conductivity and transmissivity estimates are based on single well drawdown data, a porous-medium equivalent model and Hvorslev's 1951 porosity equation.

NA = Not Applicable